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10/582,306	08/10/2007	Herbert Koch	Muller-57	4973
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C. JAMES BUSHMAN 5851 San Felipe SUITE 975 HOUSTON, TX 77057			HAMMER, KATIE L	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/582,306	<b>Applicant(s)</b> KOCH, HERBERT	
	<b>Examiner</b> KATIE HAMMER	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 20-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

### **DETAILED ACTION**

1. This office action is in response to applicant's amendments filed on September 14, 2009. Claims 1-17 and 20-23 are pending in this application. Claims 2-4, 6-7, 10, and 12-16 have been amended. Claims 18-19 have been cancelled. Claims 21-23 are newly added.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-17 and 20-23 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

3. Claim 7 is objected to because of the following informalities: After cancellation of the end part of the claim, the comma needs to be replaced by a period. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 8, 10-11, and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

In the present instance, claim 8 recites the broad recitation less than 10 weight% of isophthalic acid or its derivatives, and the claim also recites especially no isophthalic acid or its derivatives are employed, which is the narrower statement of the limitation. Claim 11 recites the broad recitation aliphatic C<sub>1</sub> to C<sub>18</sub> alcohols, and the claim also recites preferably C<sub>1</sub> to C<sub>6</sub> alcohols, which is the narrower statement of this limitation.

Claim 17 recites the limitation "the polyols have less than 3 OH groups". There is insufficient antecedent basis for this limitation in the claim, as claim 17 is dependent upon one of claims 1 or 2, which do not claim the polyol component.

Claims 10 and 17 claim limitations for the polyester **product**, but the independent claim is a **method** of preventing or minimizing dye redeposition onto textile fabrics by

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contacting the dyed fabric. Therefore, the instantly claimed product requirements need to be claimed as active method steps to further limit the independent claim. One possible correction for instant claim 10 would be: "a method according to any one of claim 4 or 5, further characterized by incorporating anionic monomers on the polyester and/or capping the polyester with terminal groups in order to anionically modify the claimed polyester."

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 17, and 20 (as dependent on claim 1) are rejected under 35 U.S.C. 103(a) as being unpatentable over Salsman et al. (US 6,008,182) in view of Koch et al. (WO 02/18474). For ease of examination, all references to the text of Koch et al. are to the English equivalent (US 7,119,056 B2).

As to claims 1 and 20, Salsman et al. teaches a method of preventing or minimizing dye redeposition onto textile fabrics during stonewashing and/or biostoning of indigo-dyed cotton fabrics by contacting the dyed fabric comprising cotton fabrics with a dye redeposition inhibitor during the dye removal process, characterized in that the dye redeposition inhibitor is a polyester (see abstract and col. 11, lines 53-56); an indigo dyed cotton fabric produced by the method (see col. 11, lines 53-56).

Salsman et al. fails to teach or disclose the polyester obtained by reacting the instantly claimed monomers during an esterification reaction as claimed in claim 1.

However, Koch et al., in an analogous art of polyesters used as additives in textile cleaning agents, teaches a polyester obtained by reacting at least the following monomers during an esterification reaction: (A) one or more dicarboxylic acid compound(s), wherein terephthalic acid makes up more than 90 mole% of the dicarboxylic acid compounds employed (see col. 2, lines 39-44 and col. 3, lines 9-24), (B) one or more diol compound(s) having from 2 to 6 carbon atoms, wherein ethylene glycol makes up more than 90 mole% of the diol compounds employed (see col. 2, lines 53-54 and col. 3, lines 36-44), and (C) polyetherols with one or two hydroxy groups having at least 6 oxygen atoms, wherein polyethylene glycol having a molecular weight from 2000 to 8000 g/mole makes up more than 90 weight% of the polyetherols employed (see col. 2, lines 47-52 and col. 3, lines 31-35), and the monomers (A), (B), and (C) comprise more than 80 wt% of the monomers in the polyester (see col. 2, lines 55-59).

Therefore, in view of the teaching of Koch et al., one having ordinary skill in the art at the time the invention was made would be motivated to modify the method of preventing or minimizing dye redeposition onto textile fabrics as taught by Salsman et al. by incorporating the specific polyester taught by Koch et al. to arrive at the claimed invention because Salsman et al. teaches a process for washing dyed fabrics or garments containing a polyester resin composition employed as a dye redeposition agent made from terephthalate polymers (see abstract and col. 3, lines 46-52). Koch et

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al. clearly teaches the use of the claimed polyesters used as additives in textile cleaning agents such as detergents (see col. 5, lines 4-7), and, thus, a person of ordinary skill in the art would be motivated to select the instantly claimed method with a reasonable expectation of success for easier handling, increased soil repellency, and preventing dirt from resettling onto the material (see col. 1, lines 23-29 and col. 2, lines 4-38), and would expect such a method to have similar properties to those claimed, absent unexpected results.

As to claims 2-3, Koch et al. teaches the method characterized in that the monomers (A), (B), and (C) comprise more than 90 wt% of the monomers in the polyester (see col. 2, lines 39-59); the method characterized in that the polyester comprises a monomer (D) of one or more polyol compound(s) with at least 3 OH groups having from 3 to 12 carbon atoms (see col. 2, lines 45-46 and col. 3, lines 25-30).

As to claim 17, it is noted that one of ordinary skill in the art could incorporate a polyol with less than 3 OH groups in the polyester composition to carry out the instantly claimed method. Therefore, the claimed limitation is not patentable.

**6.** Claims 4-9, 10-11, 13-15 (as dependent on claim 5), 16, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salsman et al. (US 6,008,182) in view of Koch et al. (WO 02/18474). For ease of examination, all references to the text of Koch et al. are to the English equivalent (US 7,119,056 B2).

As to claim 4, Salsman et al. teaches a method of preventing or minimizing dye redeposition onto textile fabrics during stonewashing and/or biostoning of indigo-dyed

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cotton fabrics by contacting the dyed fabric comprising cotton fabrics with a dye redeposition inhibitor during the dye removal process, characterized in that the dye redeposition inhibitor is a polyester (see abstract and col. 11, lines 53-56).

Salsman et al. fails to teach or disclose the polyester obtained by reacting the instantly claimed monomers during an esterification reaction as claimed in claim 4.

However, Koch et al., in an analogous art of polyesters used as additives in textile cleaning agents, teaches a polyester obtained by reacting at least the following monomers during an esterification reaction: (A) 20 to 50 mole% of one or more dicarboxylic acid compound(s) (see col. 2, lines 39-44 and col. 3, lines 9-24), (B) more than 0 to 30 mole% of one or more diol compound(s) having from 2 to 6 carbon atoms (see col. 2, lines 53-54 and col. 3, lines 36-44), (C) 10.1 to 50 mole% of one or more water-dilutable polyetherol(s), produced by the addition of one or more C<sub>2</sub> to C<sub>4</sub> alkylene oxide(s) to a C<sub>1</sub> to C<sub>18</sub> alcohol, with one hydroxy group, wherein the alkylene oxide/alcohol mole ratio is in the range from 4 to 100:1 (see col. 2, lines 46-53 and col. 3, lines 31-35), and (D) 10.1 to 29.9 mole% of one or more polyol compound(s) having at least 3 OH groups (see col. 2, lines 45-46 and col. 3, lines 25-30).

Therefore, in view of the teaching of Koch et al., one having ordinary skill in the art at the time the invention was made would be motivated to modify the method of preventing or minimizing dye redeposition onto textile fabrics as taught by Salsman et al. by incorporating the specific polyester taught by Koch et al. to arrive at the claimed invention because Salsman et al. teaches a process for washing dyed fabrics or garments containing a polyester resin composition employed as a dye redeposition



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agent made from terephthalate polymers (see abstract and col. 3, lines 46-52). Koch et al. clearly teaches the use of the claimed polyesters used as additives in textile cleaning agents such as detergents (see col. 5, lines 4-7), and, thus, a person of ordinary skill in the art would be motivated to select the instantly claimed method with a reasonable expectation of success for easier handling, increased soil repellency, and preventing dirt from resettling onto the material (see col. 1, lines 23-29 and col. 2, lines 4-38), and would expect such a method to have similar properties to those claimed, absent unexpected results.

As to claims 5-7, 9, 11, 13 (as dependent on claim 5), 16, and 21, Koch et al. teaches the method characterized in that 1 to 10 mole% of the diol compound (B) is incorporated (see col. 2, lines 53-54); the method characterized in that the average molecular weight of the polyester is less than 5000 g/mole (see col. 3, lines 56-58); the method characterized in that the dicarboxylic acid compounds (A) are selected from the group consisting of terephthalic acid, isophthalic acid, phthalic acid and their derivatives, and mixtures thereof (see col. 3, lines 18-24); the method characterized in that the diol compound (B) is ethylene glycol, or propylene glycol, or mixtures thereof (see col. 3, lines 36-44); the method characterized in that the polyetherols (C) are alkylene oxide addition products of ethylene oxide, propylene oxide, butylene oxide, or their mixtures and aliphatic C<sub>1</sub> to C<sub>18</sub> alcohols (see col. 2, lines 47-52 and col. 3, lines 31-35); the method characterized in that the polyester is liquid at room temperature (oligoesters are free-flowing at ambient temperature, see col. 1, lines 4-6); the method characterized in that the polyetherols (C) have from 16 to 180 alkylene oxide units selected from the

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group consisting of ethylene oxide units, propylene oxide units, butylene oxide units, and mixtures thereof (see col. 2, lines 47-52 and col. 3, lines 31-35); the method wherein said dicarboxylic acid compounds comprise of terephthalic acid and its derivatives (see col. 3, lines 22-24).

As to claims 8 and 22, it is noted that one of ordinary skill in the art could optimize the amount of each component used in the composition, such as the instantly claimed isophthalic acid and its derivatives or terephthalic acid and its derivatives, based on routine experimentation and the teachings of Koch et al. Burden is shifted to the Applicant to provide evidence that the claimed ranges produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art. See *In re Dreyfus*, 22 CCPA (Patents) 830, 73 F.2d, *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

As to claim 10, it is noted that one of ordinary skill in the art knows how to anionically modify polyesters by incorporation of anionic monomers or capping with terminal end groups. Therefore, the instantly claimed limitation is not novel over the knowledge of those with ordinary skill in the art.

As to claims 14-15 (as dependent on claim 5), Salsman et al. teaches the method characterized in that for the removal of dye abrasive stones and/or enzymes are put into contact with the fabric in order to achieve a stonewashed look (see col. 6, lines 43-45); the method characterized in that the dye redeposition inhibitor is put into contact with the fabric both during the stonewashing step and any preceding desizing step (see col. 11, line 53 to col. 12, line 29).

7. Claims 12, 13-15 (as dependent on claim 12), and 20 (as dependent on claim 12) are rejected under 35 U.S.C. 103(a) as being unpatentable over Salsman et al. (US 6,008,182) in view of Koch et al. (WO 02/18474). For ease of examination, all references to the text of Koch et al. are to the English equivalent (US 7,119,056 B2).

As to claim 12 and 20, Salsman et al. teaches a method of preventing or minimizing dye redeposition onto textile fabrics during stonewashing and/or biostoning of indigo-dyed cotton fabrics by contacting the dyed fabric comprising cotton fabrics with a dye redeposition inhibitor during the dye removal process, characterized in that the dye redeposition inhibitor is a polyester (see abstract and col. 11, lines 53-56); an indigo dyed cotton fabric produced by the method (see col. 11, lines 53-56).

Salsman et al. fails to teach or disclose the polyester having the formula as claimed in claim 12 wherein the polyesters have molecular weights of less than 5,000 g/mole.

However, as to claims 12-13, Koch et al., in an analogous art of polyesters used as additives in textile cleaning agents, teaches the polyester having the formula as claimed in claim 12 wherein the polyesters have molecular weights of less than 5,000 g/mole (see col. 2, lines 39-54 and col. 3, lines 56-58); the method characterized in that the polyester is liquid at room temperature (oligoesters are free-flowing at room temperature, see col. 1, lines 4-6).

Therefore, in view of the teaching of Koch et al., one having ordinary skill in the art at the time the invention was made would be motivated to modify the method of

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preventing or minimizing dye redeposition onto textile fabrics as taught by Salsman et al. by incorporating the specific polyester taught by Koch et al. to arrive at the claimed invention because Salsman et al. teaches a process for washing dyed fabrics or garments containing a polyester resin composition employed as a dye redeposition agent made from terephthalate polymers (see abstract and col. 3, lines 46-52). Koch et al. clearly teaches the use of the claimed polyesters used as additives in textile cleaning agents such as detergents (see col. 5, lines 4-7), and, thus, a person of ordinary skill in the art would be motivated to select the instantly claimed method with a reasonable expectation of success for easier handling, increased soil repellency, and preventing dirt from resettling onto the material (see col. 1, lines 23-29 and col. 2, lines 4-38), and would expect such a method to have similar properties to those claimed, absent unexpected results.

As to claims 14-15 (as dependent on claim 12), Salsman et al. teaches the method characterized in that for the removal of dye abrasive stones and/or enzymes are put into contact with the fabric in order to achieve a stonewashed look (see col. 6, lines 43-45); the method characterized in that the dye redeposition inhibitor is put into contact with the fabric both during the stonewashing step and any preceding desizing step (see col. 11, line 53 to col. 12, line 29).

**8.** Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salsman et al. (US 6,008,182) in view of Koch et al. (WO 02/18474). For ease of examination, all references to the text of Koch et al. are to the English equivalent (US 7,119,056 B2).

As to claim 23, Salsman et al. teaches a method of preventing or minimizing dye redeposition onto textile fabrics during stonewashing and/or biostoning of indigo-dyed cotton fabrics by contacting the dyed fabric comprising cotton fabrics with a dye redeposition inhibitor during the dye removal process, characterized in that the dye redeposition inhibitor is a polyester (see abstract and col. 11, lines 53-56).

Salsman et al. fails to teach or disclose the polyester obtained by reacting the instantly claimed monomers during an esterification reaction as claimed in claim 23.

However, Koch et al., in an analogous art of polyesters used as additives in textile cleaning agents, teaches a polyester obtained by reacting at least the following monomers during an esterification reaction: (A) 20 to 50 mole% of one or more dicarboxylic acid compound(s) (see col. 2, lines 39-44 and col. 3, lines 9-24), (B) 1 to 10 mole% of one or more diol compound(s) having from 2 to 6 carbon atoms (see col. 2, lines 53-54 and col. 3, lines 36-44), (C) 10.1 to 50 mole% of one or more water-dilutable polyetherol(s), produced by the addition of one or more C<sub>2</sub> to C<sub>4</sub> alkylene oxide(s) to a C<sub>1</sub> to C<sub>18</sub> alcohol, with one hydroxy group, wherein the alkylene oxide/alcohol mole ratio is in the range from 4 to 100:1 (see col. 2, lines 46-53 and col. 3, lines 31-35), and (D) 10.1 to 29.9 mole% of one or more polyol compound(s) having at least 3 OH groups (see col. 2, lines 45-46 and col. 3, lines 25-30).

Therefore, in view of the teaching of Koch et al., one having ordinary skill in the art at the time the invention was made would be motivated to modify the method of preventing or minimizing dye redeposition onto textile fabrics as taught by Salsman et al. by incorporating the specific polyester taught by Koch et al. to arrive at the claimed

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invention because Salsman et al. teaches a process for washing dyed fabrics or garments containing a polyester resin composition employed as a dye redeposition agent made from terephthalate polymers (see abstract and col. 3, lines 46-52). Koch et al. clearly teaches the use of the claimed polyesters used as additives in textile cleaning agents such as detergents (see col. 5, lines 4-7), and, thus, a person of ordinary skill in the art would be motivated to select the instantly claimed method with a reasonable expectation of success for easier handling, increased soil repellency, and preventing dirt from resettling onto the material (see col. 1, lines 23-29 and col. 2, lines 4-38), and would expect such a method to have similar properties to those claimed, absent unexpected results.

### ***Conclusion***

9. The references listed on form PTO-1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the rejection above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATIE HAMMER whose telephone number is (571)270-7342. The examiner can normally be reached on Monday to Friday, 10:00am EST to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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